

REQUESTED AMENDMENTS

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously Amended) A method of manufacturing a separator for a fuel cell comprising:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin, and further wherein a ratio of an amount of an epoxy group of said epoxy resin to an amount of a hydroxyl group of said phenolic resin in the raw material is adjusted to a value ranging from 0.8 to 1.2 such that generation of a reaction byproduct gas is minimized;

charging the raw material into a predetermined mold; and

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized.

2. (Cancelled)

3. (Previously Amended) A method according to claim 1, wherein the epoxy resin comprises a cresol novolac epoxy resin.

4. (Allowed)

5. (Previously Amended) A method according to claim 1, wherein the epoxy resin comprises a bisphenol A epoxy resin.

6. (Previously Amended) A method according to claim 1, wherein the phenolic resin comprises a novolac phenolic resin.

7. (Previously Amended) A method according to claim 1, wherein the phenolic resin comprises a resorcinol phenolic resin.

8. (Original) A method according to claim 1, wherein the carbon comprises a powder formed of scaly natural graphite particles having an average particle size ranging from 5 to 50 μ m.

9. (Allowed)

10. (Previously amended) A method of manufacturing a separator for a fuel cell comprising:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

11. (Original) A method according to claim 1, wherein a ratio of a density of the separator to a theoretical density is at least 93%, wherein the theoretical density is derived from a density of a material constituting the raw material and a component ratio thereof.

12. (Cancelled)

13. (Currently amended) A method of manufacturing a separator for a fuel cell comprising:

preparing a raw material by mixing a carbon and a resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the resin is carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the resin is carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

14-17 (Cancelled)

18. (New) A separator for a fuel cell prepared by a process comprising the steps of:
preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin, and further wherein a ratio of an amount of an epoxy group of said epoxy resin to an amount of a hydroxyl group of said phenolic resin in the raw material is adjusted to a value ranging from 0.8 to 1.2 such that generation of a reaction byproduct gas is minimized;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized.

19. (New) A separator for a fuel cell prepared by a process comprising the steps of:
preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized,

wherein the step of preparing the raw material includes the substeps of:

forming the raw material into a slurry; and

preparing a power having an average particle size ranging from 50 to 150 μm and a particle size distribution ranging from 50 to 300 μm by spraying and drying the slurry for granulation.

20. (New) A separator for a fuel cell prepared by a process comprising the steps of:
preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin,
wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

21. (New) A separator for a fuel cell prepared by a process comprising the steps of:
preparing a raw material by mixing a carbon and a resin;
charging the raw material into a predetermined mold;
heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the resin is carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the resin is carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

CONCLUSION


In view of the foregoing re-submitted claim amendments, it is respectfully submitted that the claims are in condition for allowance along with allowed claims 4 and 9. The Applicant therefore earnestly solicits the issuance of a Notice of Allowance for claims 1, 3, 5-8, 10, 11, 13 and 18-21.

The Examiner is invited to contact the undersigned at (202) 220-4232 to discuss any matter concerning this application.

The Office is authorized to charge any underpayment or credit any overpayment to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,

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